

Amendments to the Specification

Please replace paragraph [0004] with the following amended paragraph:

[0004] There is considerable interest in processes for the preparation of semiconductor nanocrystals, the applications for which include, for example, optical communications, photonic chips, photovoltaic devices, and biolabels for bioimaging. Traditional preparative routes to III-V semiconductor nanocrystals require the use of coordination solvents such as trioctylphosphine oxide (“TOPO”) or dodecylamine (“DA”) and generally require long reaction times at high temperatures (i.e., 3-6 days at ~ 300-400°C). See, for example, U.S. Patent No. ~~6,06,736~~ 6,306,736 to Alivisatos et al. Decomposition products resulting from these methods have been shown to possess optical properties which have the potential to interfere with the optical properties of the desired III-V nanocrystals. Moreover, the III-V semiconductor nanocrystals prepared by these methods are generally polydispersed (1-20 nm) and the results are somewhat erratic or irreproducible. An added disadvantage is that when any of the commonly utilized surfactants are exposed to high temperatures (>100°C), their optical properties also have the potential to mask or obscure the optical properties of the desired nanocrystals.

Please replace paragraph [0016] with the following amended paragraph:

[0016] Formula (I) is ML_n and Formula (II) is $E(SiR_3)_n$ [Where] where n is 3, M is a Group III metal, and E is a Group V element [Where] or n is 2, M is a Group II metal, and E is a Group VI element [Where] ; L is a ligand [Where] ; and R is H , $-(CH_2)_mCH_3$, ~~$-(C(CH_2)_2)_mCH_3$~~ , ~~$-(C(CH_3)_2)_mCH_3$~~ , ~~$-(C(CH_2)_2)_m(CH_2)_zCH_3$~~ , ~~$-(C(CH_3)_2)_m(CH_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_2)_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_3)_2)_zCH_3$~~ , or any combination thereof, and where m and z are real numbers.

Please replace the section containing paragraphs [0021] and [0022] with the following amended section:

[0021] Formula (V) is $M^1(C_5R^2_kH_{5-k})_3$ [Where] where M^1 is a Group III metal [Where] ; and k is 0-5 [Where] ; R^2 is H , $-(CH_2)_mCH_3$, ~~$-(C(CH_2)_2)_mCH_3$~~ , ~~$-(C(CH_3)_2)_mCH_3$~~ , ~~$-(C(CH_2)_2)_m(CH_2)_zCH_3$~~ , ~~$-(C(CH_3)_2)_m(CH_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_2)_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_3)_2)_zCH_3$~~ , or any combination thereof, and where m and z are real numbers.

$-(C(CH_3)_2)_m(CH_2)_zCH_3$, $-(CH_2)_m(C(CH_3)_2)_zCH_3$, or any combination thereof, ~~and~~ where m and z are real numbers.

[0022] Formula (VI) is $HER^3_x[[. \text{ Where}]]$, where x is 2[[,]] and E is a Group V element, ~~and where~~ or x is 1[[,]] and E is a Group VI element[[.]] ; and R^3 is H, $-(CH_2)_mCH_3$, $-(C(CH_3)_2)_mCH_3$, $-(C(CH_3)_2)_m(CH_2)_zCH_3$, $-(CH_2)_m(C(CH_3)_2)_zCH_3$, and or any combination thereof, ~~and~~ where m and z are real numbers[[. When]] , and when x is 1, R^3 may additionally be $C(O)R^3$.

Please replace the section containing paragraphs **[0047]** and **[0048]** with the following amended section:

[0047] E^1 is a Group V element, and E^2 is a Group VI element. R^1 may, for example, be H, $-(CH_2)_mCH_3$, $-(C(CH_3)_2)_mCH_3$, $-(C(CH_3)_2)_m(CH_2)_zCH_3$, $-(CH_2)_m(C(CH_3)_2)_zCH_3$, or any combination thereof[[.]] , where m and z are real numbers.

[0048] R may, for example, be H, $-(CH_2)_mCH_3$, $-(C(CH_3)_2)_mCH_3$, $-(C(CH_3)_2)_m(CH_2)_zCH_3$, $-(CH_2)_m(C(CH_3)_2)_zCH_3$, or any combination thereof[[.]] , where m and z are real numbers. R is preferably, alkyl, and more preferably, methyl.

Please replace paragraph **[0055]** with the following amended paragraph:

[0055] X may, for example, be Cl, carboxylate, carbonate, $-E^1R^1_2$, $-E^2R^1$, $-E^2C(O)R^1$, and beta-diketonates or beta-diketonate derivatives[[.]] , where E^1 is a Group V element[[, and]] ; E^2 is a Group VI element[[.]] ; and R^1 may be, for example, H, $-(CH_2)_mCH_3$, $-(C(CH_3)_2)_mCH_3$, $-(C(CH_3)_2)_m(CH_2)_zCH_3$, $-(CH_2)_m(C(CH_3)_2)_zCH_3$, or any combination thereof[[.]] , where m and z are real numbers.

Please replace paragraph **[0059]** with the following amended paragraph:

[0059] Formula (V) is $M^1(C_5R^2_kH_{5-k})_3$ [[.]] , where M^1 is a Group III metal, such as, for example, Al, Ga, or In[[.]] ; R^2 is, for example, H, $-(CH_2)_mCH_3$, ~~$-(C(CH_2)_2)_mCH_3$~~ , ~~$-(C(CH_3)_2)_mCH_3$~~ , ~~$-(C(CH_2)_2)_m(CH_2)_zCH_3$~~ , ~~$-(C(CH_3)_2)_m(CH_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_2)_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_3)_2)_zCH_3$~~ , or any combination thereof[[.]] , where m and z are real numbers[[.]] ; and k is 0-5.

Please replace paragraph **[0061]** with the following amended paragraph:

[0061] Formula (VI) is HER^3_x [[. Where]] , where x is 2[[.]] and E is a Group V element, such as, for example, N, P, As, or Sb[[. Where]] , or x is 1[[.]] and E is a Group VI element, such as, for example, O, S, Se, or Te[[.]] ; and R^3 may be, for example, H, $-(CH_2)_mCH_3$, ~~$-(C(CH_2)_2)_mCH_3$~~ , ~~$-(C(CH_3)_2)_mCH_3$~~ , ~~$-(C(CH_2)_2)_m(CH_2)_zCH_3$~~ , ~~$-(C(CH_3)_2)_m(CH_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_2)_2)_zCH_3$~~ , ~~$-(CH_2)_m(C(CH_3)_2)_zCH_3$~~ , or any combination thereof[[.]] , where m and z are real numbers[[. Where]] , and when x is 1, R^3 may additionally be $C(O)R^3$.